

DISCUSSION OF THE AMENDMENT

Claims 80, 82, 88-89 and 93-108 are active in the present application. Claims 1-79, 81, 83-87 and 90-92 are canceled claims. Claims 93-108 are new claims. Support for the new claims are found in the original claims, the previously presented claims, and on page 3, lines 29-32 of the present specification.

Applicants submit that even if the present English specification does not explicitly disclose the words “vinylidene double bonds” a certified English translation of the foreign language PCT application to which the present U.S. application claims priority includes this term. As evidence, Applicants submit concurrently herewith a certified English translation of the originally filed PCT application (i.e., PCT/EP00/09745) to which the present U.S. has the benefit of the U.S. effective filing date.

No new matter is added.

REMARKS

The Office rejected the previously presented claims as obvious over the combination of Colucci (U.S. 5,634,951) in combination with Plonsker (U.S. 3,904,595).

As a first point, Applicants traverse the Office's assertion that Plonsker discloses a composition that includes a chemical compound reading on di-n-butylamine. The disclosure at column 2, lines 9-18 of Plonsker, cited by the Office in the Office Action of February 7, 2008, discloses only certain amines. For example:

The aliphatic amine can be any aliphatic amine containing at least >NH group capable of entering into a Mannich condensation reaction. Preferably, the amine is an aliphatic amine containing 1 to about 20 carbon atoms such as methylamine, dimethylamine, ethylamine, diethylamine, n-propylamine, n-butylamine, isobutylamine, sec-butylamine, n-hexylamine, 2-ethylhexylamine, laurylamine, oleylamine, stearylamine, eicosylamine, piperidine, morpholine and the like.

See column 2, lines 9-18 of Plonsker.

At best, Plonsker discloses "n-butylamine." Applicants submit that n-butylamine is not the same as di-n-butylamine. Although it is possible under some interpretations that n-butylamine may describe a genus that includes di-n-butylamine, such a genus is nonetheless different from the di-n-butylamine recited in the present claims.

The Office has nowhere demonstrated that a di-n-butylamine is obvious in view of an "n-butylamine." Applicants respectfully request the Office withdraw the rejection as it applies to compositions that include a di-n-butylamine (see for example Claim 88).

Applicants submit that the subject matter of new independent Claim 93 and the claims that depend therefrom are further patentable over the prior art cited in the Office Action of February 7, 2008. For example, Colucci does not describe alkylating a phenol with a highly reactive polyisobutene having a vinylidene double bond content of more than 70 mol%.

Although Colucci may disclose generic polybutenes, the polybutenes of Colucci are derived

from 1-butene or 2-butene-based polymers that are nowhere described as having a vinylidene double bond content of 70 mol% or greater.

Colucci requires the use of particular polyamines and/or hydroxyaromatics that have only a single position on the phenolic ring at which a Mannich reaction may take place. Applicants' present Claim 93 requires reacting a phenol with a highly reactive polyisobutene having a molecular weight in the 300-850 range and a vinylene double bond content of more than 70mol%. At best, Colucci discloses the use of generic polyisobutenes. Colucci does not disclose or suggest that the particular polyisobutene recited in Claim 93 is preferred or favored or that the use of such a polyisobutene advantageously forms a desirable product.

Applicants submit that Colucci, alone or in combination with Plonsker, does not provide one of ordinary skill in the art with any expectation of success or any motivation to combine the cited art to arrive at the presently claimed invention and thus the rejection should be withdrawn.

In contrast, Applicants have shown that the use of highly reactive polyisobutenes having number average molecular weights in the range recited in the present claims provide fuel and/or lubricant compositions that exhibit substantially reduced intake valve deposits (IVD) when used as fuels. For example, Table 5 on page 31 of the specification provides a series of inventive and comparative examples. Inventive examples 2-4 are carried out with highly reactive polyisobutenyl materials having a number average molecular weight within the range recited in Claim 93 (i.e., a Mn of 700). The compositions formed in the inventive examples are disclosed to provide much lower intake valve deposits in comparison to Comparative Examples 2 and 3 which are made with the additives disclosed in EP-A-0A31141 (corresponding with Colucci) instead of the Mannich adducts of the present invention.

Not only does the prior art relied on by the Office fail to expressly or inherently teach any process meeting the requirements recited in the present claims, Applicants have demonstrated that the compositions made by the presently claimed process provide substantially reduced intake valve deposit formation when used as additives in fuels.

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants request withdrawal of the rejection and the allowance of all now-pending claims.

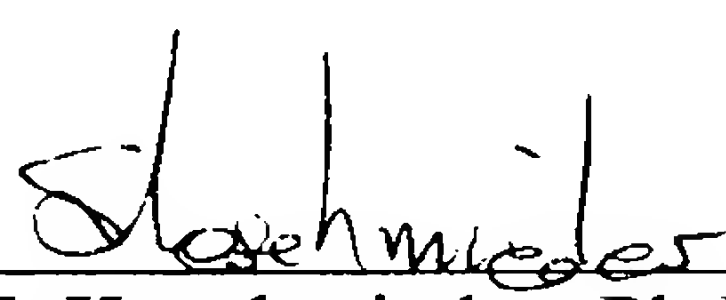
Respectfully submitted,

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